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MR. *JOHN HARRISON*.

IN 1714 a Petition of several Merchants and others was presented to Parliament, praying that a publick Reward might be offered for any Method of ascertaining the Longitude at Sea: A Committee was appointed in Pursuance thereof, at which Sir *Isaac Newton*, and other Men of Eminence, were ordered to attend; and Sir *Isaac* (enumerating the probable Methods of effecting the desired Purpose) placed an exact Time-Keeper at the Head of his List — *Vide Journals of the House of Commons, Vol. 17, Page 677.* — An Act was accordingly passed the same Year, being the 12th of Queen *Anne*, giving a Reward of

10,000 £. To the Author of any Method whereby a Ship shall actually sail under the Direction of Commissioners appointed, from Great Britain, to the *West Indies*, without losing her Longitude more than a Degree.

15,000 £. If such Ship keeps her Longitude to Two Thirds of a Degree.

20,000 £. If to Half a Degree.

IN 1726, Mr. *John Harrison* compleated a Pendulum Clock, which did not err above a Second of Time in a Month, and which continues at this Hour to go with the same Exactness, although it has never been cleaned or repaired, nor its Motion ever since stopped, except twice, when it was removed from one House to another.

IN 1735 he finished a Machine, in which the same Principles were adapted to the Motion of a Ship, which in 1736 was tryed by Direction of the first Lord of the Admiralty, in a Voyage to *Lisbon* and back, and found to answer. From that Time, till the Year 1761, he continued to improve the Invention, and had then made four Time-Keepers adapted for Use at Sea, all founded on the same Principles, but different in Size and Construction, the last being only five Inches in Diameter.

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IN 1761, Mr. *Harrison* received Orders from the Commissioners appointed by Parliament for the Trial of his Invention, in Consequence whereof, his Son went to *Jamaica* and back with the last mentioned Time-Keeper, which kept the Longitude both going and returning, within the nearest Limits of the Act of Queen *Anne*, as was proved to the Satisfaction of a Committee of the House of Commons.

ALTHOUGH he had by this Voyage fulfilled all the Conditions of the Act of Queen *Anne*, yet for greater Satisfaction, a second Trial was submitted to, on receiving 1500*l.* down, and an Engagement to pay 1000*l.* more, when he should return: Accordingly a Voyage to *Barbadoes* and back was undertaken, and finished in *July* 1764; and on the 9th of *February* 1765, the Board of Longitude declared themselves unanimously of Opinion, "That in the said Voyage the Time-Keeper had kept its Longitude with sufficient Exactness, and considerably within the nearest Limits prescribed by the Act of Queen *Anne*." Nevertheless they did not think themselves authorized to grant the Reward, until the Principles and Construction should be disclosed, and proved generally practicable and useful.

On Consultation about this Time with several eminent Men of the Law, Mr. *Harrison* found them unanimously of Opinion that he was entitled to the greatest Reward under the Act of Queen *Anne*, and therefore he conceives he had very good Reason for giving all the Opposition in his Power to an Application soon after made, for a Law to explain and amend the former, apprehending that the same could be intended for no other Purpose than to injure his Claim. His Efforts were however soon overpowered, for he had the Misfortune not to succeed in his Endeavours to shew how much the Justice of Parliament was interested in his Behalf; else he is persuaded an Act could never have been obtained whereby the Conditions of his receiving the Reward (on the Faith of which he had devoted more than forty Years of his Life to the publick Service) should be totally changed; he is else convinced that august Body would not have placed him, or the Success of an Invention, which had for Half a Century engaged the Wishes and Attention of all *Europe*, in a State of Dependance on the Opinion and good Pleasure of a Board whose Members were continually changing, and at which some of those who then took great Pains to oppose him bore no inconsiderable Sway. To this Inability of doing Justice to his own Cause, does he alone attribute their Success in procuring an Act whereby a Moiety of his Reward was directed to be paid to him on disclosing his Invention, and delivering up his four Time-Keepers to the Use of the Publick, and the other Moiety when he should have made more Watches, without determining how many, and proved them to the Satisfaction of the Commissioners, without defining the Mode of Trial.

It will not perhaps after this be thought extraordinary, that Mr. *Harrison* should proceed with some Degree of Caution, or that he should object to Words of an indeterminate Meaning being put into the Oath tendered to him about the Discovery of his Principles &c. lest he should after such Discovery be left dependent upon the Interpretation of those Words, even for the first Moiety of his Reward. He was required by *Experimental Exhibitions* to explain whatever the Commissioners and whom they should appoint, might desire, and they refused to limit themselves as to those Exhibitions, either in Point of Time, Nature, or Number. This was the Subject of some very disagreeable Altercation, which ended in Mr. *Harrison's* submitting to the Oath as tendered to him, under the personal Assurance of a Noble Lord then high in Office, of its being understood in a reasonable and limited Sense, and that his Lordship would undertake for Payment of the Reward.

ACCORDINGLY Mr. *Harrison* made a Disclosure of the Principles and Construction of his Watch to six Gentlemen appointed to receive the same, and to the Reverend Mr. *Maskeleyne*, Astronomer Royal, who attended as being one of the Commissioners, and on the 22d of *August* 1765, received from them the following Certificate.

“ We whose Names are hereunto subscribed do certify, that Mr. *John Harrison* has taken his Time-Keeper to Pieces in the Presence of us, and explained the Principles and Construction thereof, and every Thing relative thereto, to our entire Satisfaction; and that he also did to our Satisfaction answer to every Question proposed by us or any of us relative thereto; And that we have compared the Drawings of the same with the Parts, and do find that they perfectly correspond.”

IN Consequence of this Certificate, on the 28th of *October* following, Mr. *Harrison* received 7500*l*, which with the above-mentioned Sums of 1500*l* and 1000*l* made up the 10,000*l*, prescribed by the new Act. He at the same Time delivered up his last-made Time-Keeper which remained locked up in a Box at the Admiralty, till the 26th of *April* 1766, when it was removed to the Royal Observatory at *Greenwich*, where it now remains. On the 23d of *May* last, he deliver'd the other three Time-Keepers to Mr. *Maskeleyne* pursuant to Orders from the Board.

Thus far Mr. *Harrison* complied with the last Act of Parliament, and happy would he have esteemed himself in paying the same dutiful Obedience to the rest of it, could that have answer'd any good Purpose either to himself or the Publick.—But to be subjected to Trials *indefinite in their Nature and their Number*, till a Board should be satisfied which would not (tho' frequently requested) even say what Trials *would* be satisfactory; for him after making more Time-Keepers, to traverse half the World in Order to prove that he who made one Machine can make another like it (which is positively all that could be proved thereby, and the Invention would not after those Trials be a bit the nearer being made useful to the Publick than it is now) and after his Return, for a New Board of Longitude *with just equal Reason*, perhaps to determine that all he has done is inconclusive and send him with new Instruments to traverse the other Half; these are Hardships which rather than subject himself to, Mr. *Harrison* would chuse to forego the Remainder of his *well earned* Reward. Far from forming a Design of monopolizing the Advantages to arise from making these Watches, after having received the promised Bounty, he ever has, and ever will be ready on that Condition to instruct any Number of Workmen; and he declares his Opinion that a Man of tolerable Knowledge in common Watch-making, may by twelve Months Practice, under his Instruction, become perfectly able to make these; also that they may be furnished at Prices within the Reach of Purchase for common mercantile Use. And large as the Sum of Twenty Thousand Pounds may appear, if considered merely as the Reward of a lucky Thought or casual Discovery, yet when the Labour of more than Forty Years of a Man capable of perfecting a Machine of such prodigious Importance to Commerce and the Lives of Men, together with Twenty Years of his Son's Attendance, and long Voyages by Sea, are brought into the Account, it may *perhaps* be admitted that he will not, after all, be very much over paid; and that any Measure tending even to *delay* the effectual Communication of this Benefit to the Publick, for the Sake of saving to a great Nation like this, a *supposed* Possibility of Imposition in a Sum of 10,000*l*. cannot be dictated by Principles of publick Spirit,

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or a Love of Mankind. Whilst we are suffering this Machine to sleep in our Hands, the *French* more diligent, have sent over their best Artist, who after having in vain attempted to purchase the Secret from Mr. *Harrison*, has by insinuating himself into the good Graces of some of the Gentlemen to whom the Discovery was made, got out of them the whole of what they know; and he is now at *Paris*, under the immediate Protection of Government, making a Progress which must necessarily give our Rivals the first Possession of this Machine for general Use, unless some Alteration is made in our Plan of Proceeding. — What that Alteration ought to be, Mr. *Harrison* submits to those in Power, and only begs Leave with Humility to offer his Opinion, that either an Act ought to pass repealing the indeterminate Conditions of the last, and encouraging the Instruction of Workmen, rather than the making of idle Experiments, *which can prove no more than is already proved*, or else that the Commissioners should by some publick Resolution do the same Thing, and if any of them do seriously doubt of Mr. *Harrison's* being able to make other Watches like the former, that the Trial of his Ability should be of such a Nature as to go Hand in Hand with the Instruction of Workmen.

UPON the whole Mr. *Harrison* has no desire more sincere than that of communicating this Invention to the World — That it is *practicable and useful* is proved, for he has made the Watches which have kept the Longitude; and he only desires the Reward in as much as he shall contribute his utmost Endeavours to make that Utility *general*. — But, in return, he does hope for a solid Assurance of receiving that, which might at first be esteemed a Bounty, but, under the Circumstances of his Case, he now humbly conceives himself authorized to call a *Debt*, and is therefore unwilling to trust it to any precarious Security.

MR. JOHN HARRISON.

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